DVD Recorder with 160GB Hard Disc Drive
DRA-01601A

Polaroid.

User's Manual

Questions? Need some help?
This manual should help you understand your new product.
If you still have questions, call our toll-free customer service number at 1-866-286-5168.

20070406

Safety Instructions

To ensure proper use of this product, please read this user's manual carefully and save for future reference. This manual provides information regarding the use and maintenance of your DVD recorder.

About the ⊘ symbol
If the "⊘" symbol appears on your TV display during operation, the function you are trying to use is not available.

Danger symbol: The lightening flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of dangerous voltage in the unit.

Warning symbol: The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions.

WARNING:
To prevent fire or electric shock, do not expose the unit to rain or moisture. Never attempt to open the cabinet; dangerous high voltages are presented in the unit. Refer servicing to qualified service personnel when necessary.

MAINTENANCE NOTICE:
*   Do not put the unit: near strong magnetic fields, somewhere exposed direct sunlight or near heat radiation equipment (such as a heater), on top of other heat radiation objects, in a place with bad ventilation and dirt, somewhere subject to vibration and instability, or somewhere exposed to moisture or rain. The unit should be installed in a smooth and dry place with good ventilation.
*   When the unit is moved from a cold place to a warm one, the laser head may get dewed and the unit may not work normally. In this case, keep the power on for an hour or two (with no disc loaded) before playing normally.
*   Clean the surface of the unit with neutral detergent. Do not use organic solvents such as alcohol or gasoline. Never polish the unit with sand paper.
*   If the unit is not to be used for a long time, disconnect the power plug from the wall outlet.
*   For optimum performance, do not place heavy objects on the unit.

CAUTION:
*   The unit employs a laser system. To prevent direct exposure to the laser radiation, do not attempt to open the cabinet. Visible laser may radiate when the cabinet is opened or the interlocks are defeated.
*   Do not stare at laser beams.
*   To ensure the proper use of the unit, read this manual carefully.
*   Keep this manual for future reference. If the unit requires servicing, please contact the seller or service center.

MOISTURE CONDENSATION:
Never operate this unit immediately after removing it from a cold location to a worm location. Do not operate for at least three hours. If you use the unit in such a situation, it may damage the DVD recorder.

Table of Contents

Identification of Controls

1. USB port
2. S-video input
3. AV input
4. DV input
5. TV LED
6. DV LED: lights when digital video camcorder is inserted
7. USB LED: lights when USB stick is inserted
8. REC LED: lights when recording
9. PLAY button
10. PAUSE button
11. STOP button
12. SOURCE button: press to select the video input source
13. REC button: press to record
14. PREVIOUS button
15. CH- button: press to decrease channels
16. NEXT button: press to move to the next DVD chapter
17. STANDBY button
18. Remote control sensor
19. DISPLAY button: press to access the time shift screen
20. Disc tray
21. OPEN/CLOSE button: press to open or close the disc tray
22. SD card slot
23. CH+ button: press to increase channels

Identification of Controls
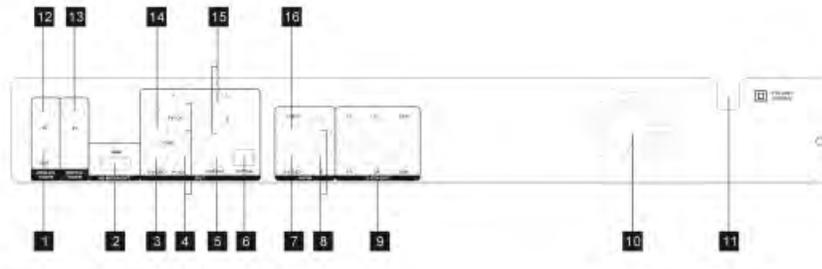
1. Analog Tuner - RF Signal Output: Connect to your TV's RF input
2. HD Media Output: Provides a high-quality interface for digital audio and video using one cable
3. S-video Output: Connect to your TV's S-video input
4. Component Video Output: Connect to your TV's component input
5. Digital Audio Coaxial Output: Using a coaxial digital audio type cable, connect to your home theatre system's coaxial input
6. Digital Audio Optical Output: Using a coaxial optical type cable, connect to your home theatre system's coaxial input
7. S-video Input: Connect your S-video cable from your other A/V equipment to the S-video input
8. Analog Audio Input (Right/Left Channels): Connect from your other A/V equipment to the analog audio input
9. 5.1 CH Audio Output (Home Theatre System): These outputs connect to your home theatre system's amplifier speaker inputs
10. Fan
11. AC Power 110-240V 50/60Hz
12. Analog Tuner - RF Signal Input: Connect to an external antenna or cable line without using a cable box
13. Digital Tuner Input: Connect to an external (digital TV) antenna
14. Composite Video Output: Connect to your TV's composite video input
15. Analog Audio Output (Right/Left Channel): Connect to your TV's analog audio input
16. Composite Video Input: Connect from your other A/V equipment to composite video input

Remote Control

1. POWER button: turns unit on and off
2. REC button: press to record
3. CH+ button: press to increase channels
4. PAUSE button: press to pause playback
5. CH- button: press to decrease channels
6. UP arrow
7. LEFT arrow, 10 second replay
8. ENTER button: press to select
9. SETUP button: press to enter setup menu
10. ◄◄ button: press to go fast backward
11. ►► button: press to go fast forward
12. MUTE button: press to cancel sound
13. TITLE button: press to access DVD title menu
14. ADD/CLEAR button: press to highlight video segments when copying
15. I/P button: press to change video display (interlaced or progressive video)
16. AUDIO button: press to view current OSD language
17. SUBTITLE button: press to display DVD playback language on the screen
18. TIMER button: press to set a timer recording
19. EDIT button: press to enter the edit mode
20. DVD button: press to select DVD record or playback
21. HDD button: press to select HDD record or playback
22. OPEN/CLOSE button: press to open or close the disc tray
23. Number pads
24. VOL+ button: press to increase volume
25. STOP button
26. VOL- button: press to decrease volume
27. PLAY button
28. RIGHT arrow, 30 second skip
29. DOWN arrow
30. SOURCE button: press to select the video input source
31. NEXT button: press to move to the next DVD chapter
32. PREVIOUS button: press to move to the previous DVD chapter
33. RETURN button: press to exit an OSD screen, also brings you back to the previous channel you were viewing in the television function
34. MENU button: press to access the menu screen
35. DISPLAY button: press to access the time shift screen
36. ZOOM button: press to increase the on-screen image
37. TIME SHIFT button: press to access the time shift function
38. ANGLE button: in DVD playback, if the disc has the function, press to change angle views
39. A-TV button: press to select analog television
40. DISC OPER button: press to access recorded program for editing (DVD only)
41. D-TV button: press to select digital television
42. FILE button: press to access the file manager
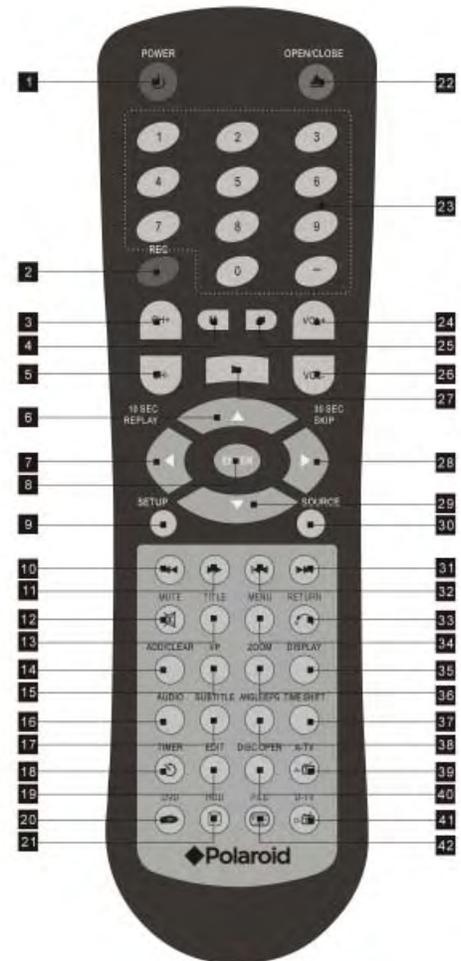
Remote Control

To install batteries and use remote control:

Notes:
• Do not drop the remote control or leave it in places with high humidity.
• Do not leave the IR remote sensor exposed to direct sunlight or bright light.
• Do not mix old and new batteries should they need replacing.
• Do not use rechargeable batteries.
• Remote range = 16 feet.

System Connections

- Before making any connections, ensure all units are off and unplugged from the power source.
- You may need to review your TV's user's manual to refresh yourself with your TV's inputs and output.
- Refer to the Rear Panel diagram for numbered explanations of the back panel

CONNECTING A DIGITAL SIGNAL FROM AN ANTENNA:
- Using the RF connection from your antenna, connect the cable to the digital tuner input on the back panel of your DVD Recorder (#13).

CONNECTING AN ANALOG SIGNAL FROM CABLE (WITHOUT USING A CABLE BOX):
- If you want to scan basic cable TV channels, you must bypass the cable box. See "ATV Auto Scan Channel" in the "Setup" section of this user's manual for instructions on how to scan channels.
- Using the RF connection from your wall outlet, connect the cable to the analog tuner input (#12) on the back panel of your DVD Recorder.

CONNECTING AN ANALOG SIGNAL FROM DVD RECORDER TO TV:
- Using the RF input connection from your TV, connect the cable to the RF Signal Output (#1) on the back panel of your DVD Recorder.
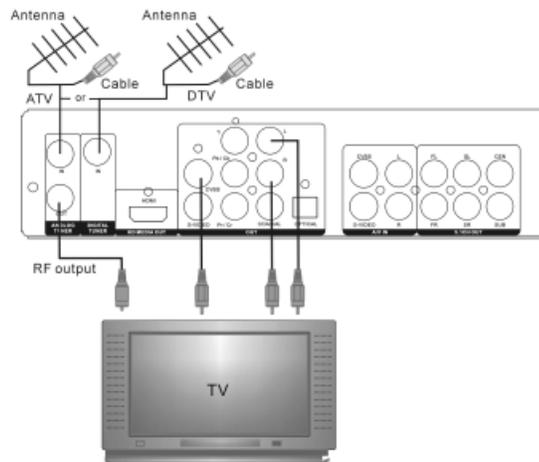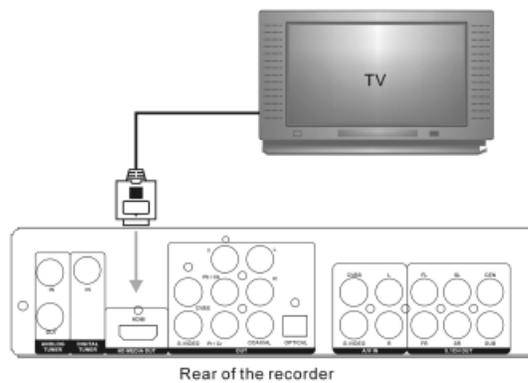
System Connections

CONNECTING TO AN HDMI SIGNAL:

HDMI has the capability to support standard, enhanced, or high-definition video, plus standard to multi-channel surround sound audio. HDMI features include uncompressed digital video, one connection (instead of several), and communication between the AV source and AV device such as digital television.

- Using an HDMI cable (not included), connect the HDMI cable from the TV to the HD Media Output (#2) on the rear panel of your DVD Recorder.
- When using the HDMI connection, you may need to change the resolution (480p, 480i) in your DVD Recorder's setup menu.

Rear of the recorder

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI licensing LLC.

System Connections

CONNECTING VIDEO OUTPUT TO YOUR TV:
There are three different types of video output you can choose to connect to your TV: S-video, component (Y Pb Pr), and composite (CVBS). (See S-video section on the next page for S-video connection steps.)

COMPOSITE VIDEO:
- Insert the yellow video cable (included) into the yellow composite video output labeled CVBS (#14) on the rear panel of your DVD Recorder.
- Connect the other end of the yellow video cable to the corresponding input on your TV.

COMPONENT VIDEO:
- Insert the red, green, and blue cables (not included) into the red, green, and blue component video labeled Y Pb Pr (#4) on the rear panel of your DVD Recorder.
- Connect the other ends to the corresponding inputs on your TV.

CONNECTING ANALOG AUDIO OUTPUT TO YOUR TV:
- Insert the red and white audio cables into the red and white analog audio output (#15) on the rear panel of your DVD Recorder.
- Connect the other ends of the red and white audio cables to the corresponding inputs on your TV.

CONNECTING ANALOG AUDIO INPUT TO YOUR DVD RECORDER:
- Using the red and white audio cables coming from your AV equipment (ie. set-top box, cable box, satellite box, VCR, etc), connect the other ends of the cables to the analog audio input (#8) on the rear panel of your DVD Recorder.

CONNECTING VIDEO INPUT TO YOUR DVD RECORDER:
- Using the yellow video cable coming from your AV equipment (ie. set-top box, cable box, satellite box, VCR, etc), connect the other end of the yellow video cable to the composite (CVBS) video input (#16) on the rear panel of your DVD Recorder.
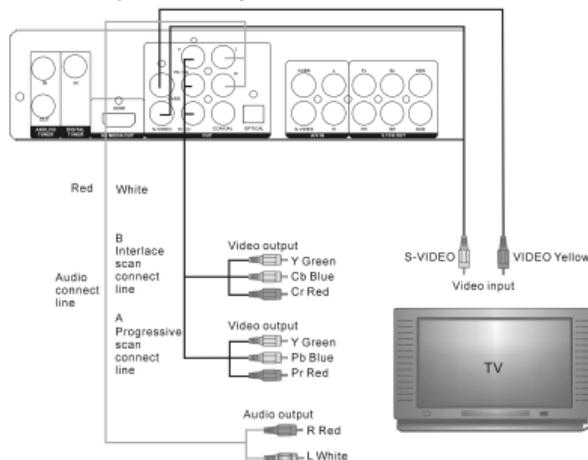
System Connections

S-VIDEO:

S-VIDEO OUTPUT:
- Insert the S-video cable (not included) into the S-video output (#3) on the rear panel of your DVD Recorder.
- Connect the other end of the S-video cable to the corresponding input on your TV.

S-VIDEO INPUT:
- Using the S-video cable coming from your AV equipment (ie. set-top box, cable box, satellite box, VCR, etc), connect the other end of the S-video cable to the S-video input (#7) on the rear panel of your DVD Recorder.
- Note: do not connect the yellow composite video cable if you are using the S-video input.

Video Out   Audio Out

TV

OR

External Signal AV

CARD INPUT

USB INPUT

Connect your recorder with the S-Video cable, if the Signal Source has an S-Video output. Do not connect the yellow video cable if using the S-Video cable.
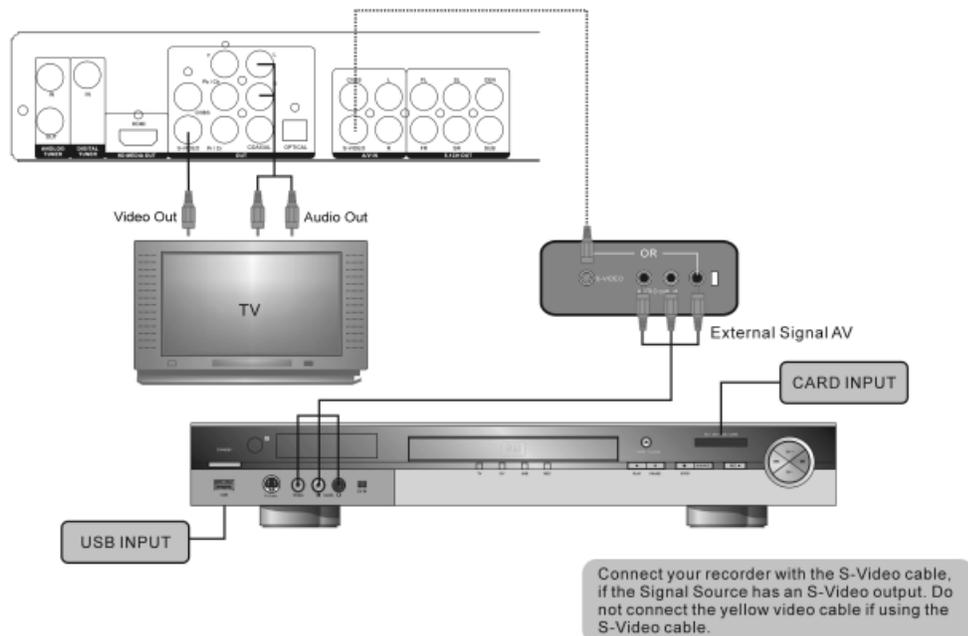
System Connections

CONNECTING AUDIO OUTPUT TO YOUR TV:

COAXIAL (DIGITAL):
- Insert the coaxial cable into the digital audio coaxial output (#5) on the rear panel of your DVD Recorder.
- Connect the other end of the coaxial cable to the corresponding inputs on either your TV or home theatre system.

OPTICAL (DIGITAL):
- Insert the optical cable into the digital audio optical output (#6) on the read panel of your DVD Recorder.
- Connect the other end of the optical cable to the corresponding inputs on either your TV or home theatre system.
- Care should be taken when handing the optical cable.

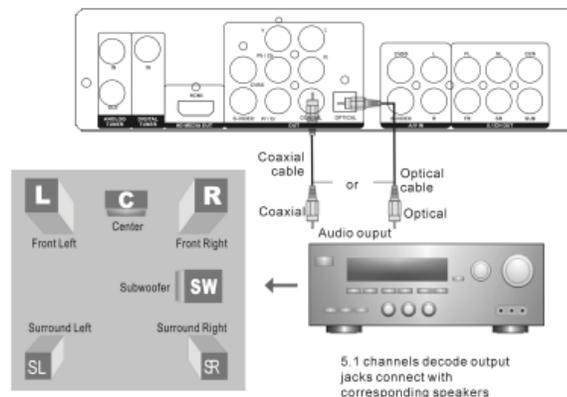**CONNECTING AUDIO FROM THE DVD RECORDER TO YOUR HOME THEATRE SYSTEM:**
There are three different ways to connect your DVD Recorder audio to your home theatre system: coaxial digital audio, optical digital audio, and 5.1 CH audio. (See 5.1 CH Audio section on next page for 5.1 CH Audio connection steps)

COAXIAL (DIGITAL):
- Insert the coaxial cable into the digital audio coaxial output (#5) on the read panel of your DVD Recorder.
- Connect the other end of the coaxial cable to the corresponding inputs on either your home theatre system.

OPTICAL (DIGITAL):
- Insert the optical cable into the digital audio optical output (#6) on the read panel of your DVD Recorder.
- Connect the other end of the optical cable to the corresponding inputs on either your home theatre system.
- Care should be taken when handing the optical cable.

System Connections

5.1 CH AUDIO

There are six outputs from the DVD Recorder that connect to your home theatre system: FL (front left), FR (front right), SL (surround left), SR (surround right), Center, and Subwoofer.

- Connect the RCA outputs from the DVD Recorder to the corresponding inputs on your home theatre system.
- Note: the subwoofer connection needs to be made with a coaxial cable (not included).
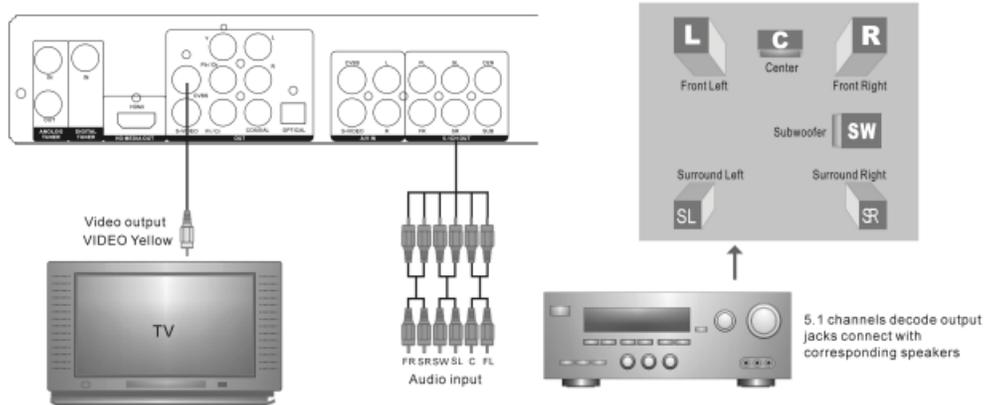
System Setup

GENERAL SETTINGS:

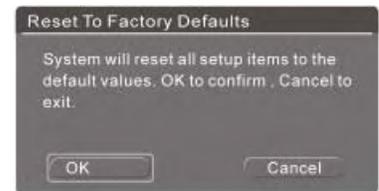|	
ATV Auto Scan Channel (Analog TV): 1. Press SETUP. 2. Press right arrow key to highlight ATV Auto Scan Channel. 3. Press ENTER to select. A dialog box will appear. 4. Press OK to accept, cancel to go back. 5. If you press OK, another dialog box will appear. 6. Press the up arrow key and then ENTER. 7. Select either Air or Cable, depending on your tuner input source. Press ENTER to make your selection. 8. Once selected, press the down arrow key to highlight "continue" and ENTER to accept. This will start the channel scanning process. 9. To cancel, press ENTER to stop. 10. To exit setup, press SETUP.	GENERAL ATV Auto Scan Channel — SCAN DTV Auto Scan Channel — SCAN DTV Display — 16:9 WS Parental Level — No Parental Change Password — OK Reset To Factory Defaults — OK
DTV Auto Scan Channel (Digital TV): 1. Press SETUP. 2. Press right arrow key and then down arrow to highlight DTV Auto Scan Channel. 3. Press ENTER to select. A dialog box will appear. 4. Press OK to accept, cancel to go back. 5. If you press OK, another dialog box will appear. 6. Press the up arrow key and then ENTER. 7. Select either Antenna or Cable, depending on your tuner input source. Press ENTER to make your selection. 8. Once selected, press the down arrow key to highlight "continue" and ENTER to accept. This will start the channel scanning process. 9. To cancel, press ENTER to stop. 10. To exit setup, press SETUP.	DTV Scan channels DTV source Type — Antenna Continue — Cancel

TV Display:
1. Press SETUP.
2. Press right arrow key and then down arrow to highlight TV Display.
3. Press ENTER to select. This selects the aspect ratio for the DVD recorder for playback. Note: you may need to modify the aspect ratio on your TV. Please consult your TV's user's manual.
4. Use the down arrow to select the desired aspect ratio and ENTER to select.
  a. 4:3 LB = black side bars
  b. 4:3 PS = black top, bottom, and sides
  c. 16:9 WS = black top and bottom bars
5. To exit setup, press SETUP.
	GENERAL
	ATV Auto Scan Channel — SCAN
	DTV Auto Scan Channel — SCAN
	DTV Display — 4:3 LB
	Parental Level — No Parental
	Change Password — OK
	Reset To Factory Defaults — OK

System Setup

GENERAL SETTINGS, CONTINUED

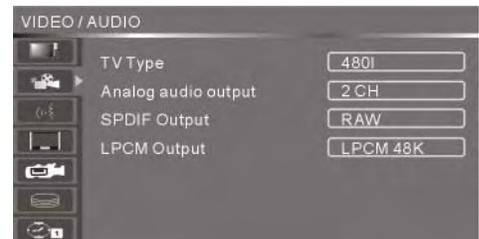|	
RESET TO FACTORY DEFAULTS: 1. Press SETUP. 2. Press right arrow key and then down arrow to highlight Reset to Factory Defaults. This will clear all changes you have made to the DVD recorder settings. 3. Press ENTER. A dialog box will appear. 4. Press "ok" to reset factory defaults, "cancel" to go back. 5. To exit setup, press SETUP.	Reset To Factory Defaults System will reset all setup items to the default values. OK to confirm , Cancel to exit. OK Cancel

AUDIO/VIDEO:

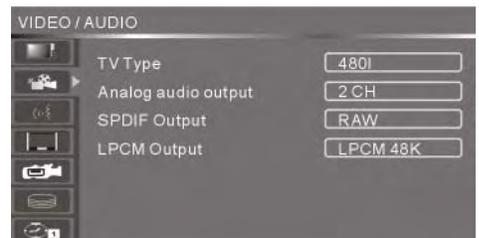|	

TV TYPE:
1. Press SETUP.
2. Press down arrow to select the Video/Audio menu.
3. Press right arrow to highlight TV Type.
4. Press ENTER. This will change the DVD recorder picture resolution.
5. Use the down arrow to select the desired picture resolution and ENTER to select.
  a. 480P = better resolution
  b. 480I = good resolution
6. To exit setup, press SETUP.
	VIDEO / AUDIO
	TV Type — 480I
	Analog audio output — 2 CH
	SPDIF Output — RAW
	LPCM Output — LPCM 48K

ANALOG AUDIO OUTPUT:
1. Press SETUP.
2. Press down arrow to select the Video/Audio menu.
3. Press right arrow key and then down arrow to highlight Analog Audio Output.
4. Press ENTER. This will change the audio output to your TV.
5. Use the down arrow to select the desired audio output and ENTER to select.
  a. 2 CH = good audio, standard red and white cables
  b. 5.1 CH = better audio, specifically for home theatre
6. To exit setup, press SETUP.
	VIDEO / AUDIO
	TV Type — 480I
	Analog audio output — 2 CH
	SPDIF Output — RAW
	LPCM Output — LPCM 48K
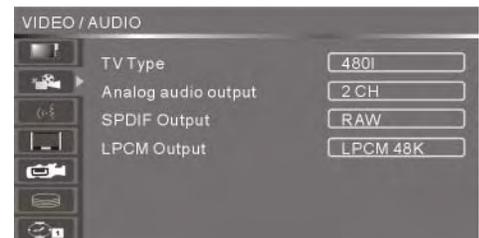
SPDIF OUTPUT (SONY PHILLIPS DIGITAL INTERFACE FORMAT):
1. Press SETUP.
2. Press down arrow to select the Video/Audio menu.
3. Press right arrow key and then down arrow to highlight SPDIF Output.
4. Press ENTER.
5. Use the down arrow to select the desired SPDIF output and ENTER to select.
  a. RAW = for 2 CH analog audio
  b. LPCM = for 5.1 CH analog audio
6. To exit setup, press SETUP.
	VIDEO / AUDIO
	TV Type — 480I
	Analog audio output — 2 CH
	SPDIF Output — RAW
	LPCM Output — LPCM 48K

System Setup

AUDIO/VIDEO, CONTINUED

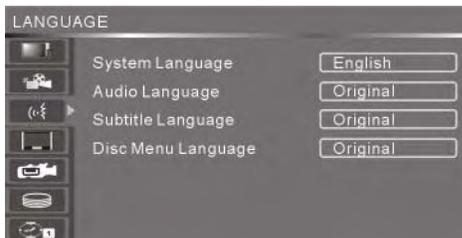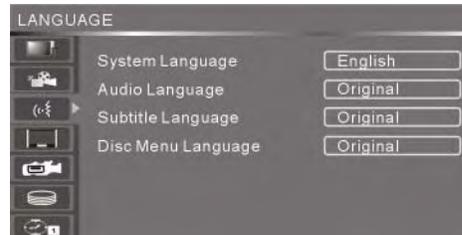|	

LPCM Output (Linear Pulse Code Modulation):
1. Press SETUP.
2. Press down arrow to select the Video/Audio menu.
3. Press right arrow key and then down arrow to highlight LPCM Output.
4. Press ENTER.
5. Use the down arrow to select the desired LPCM output and ENTER to select.
   a. 48K = good sampling resolution
   b. 96K = better sampling resolution
6. To exit setup, press SETUP.
	VIDEO / AUDIO
	TV Type 480I
	Analog audio output 2 CH
	SPDIF Output RAW
	LPCM Output LPCM 48K
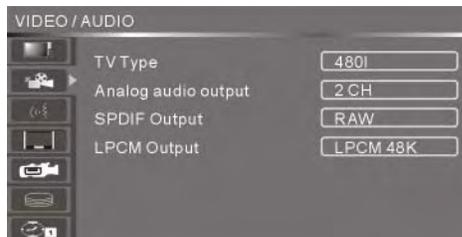
LANGUAGE:

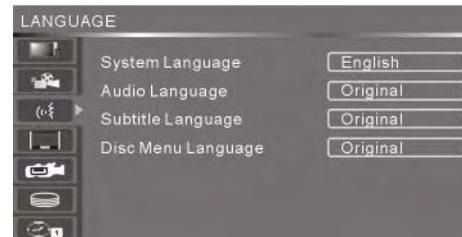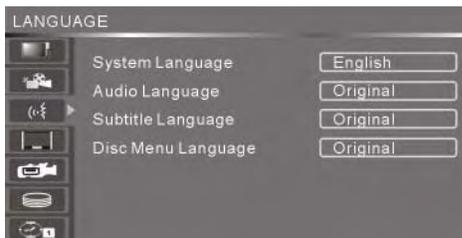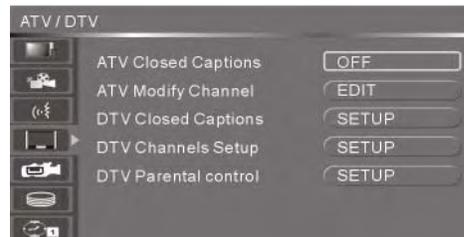|	
System Language: 1. Press SETUP. 2. Press down arrow to select the Language menu. 3. Press right arrow key to highlight System Language. 4. Press ENTER. 5. Use the down arrow to select the desired language and ENTER to select. The default is English. 6. To exit setup, press SETUP.	LANGUAGE System Language English Audio Language Original Subtitle Language Original Disc Menu Language Original
Audio Language: 1. Press SETUP. 2. Press down arrow to select the Language menu. 3. Press right arrow key and then down arrow to highlight Audio Language. 4. Press ENTER. 5. Use the down arrow to select the desired language and ENTER to select. The default is Original. 6. To exit setup, press SETUP.	LANGUAGE System Language English Audio Language Original Subtitle Language Original Disc Menu Language Original
Subtitle Language: 1. Press SETUP. 2. Press down arrow to select the Language menu. 3. Press right arrow key and then down arrow to highlight Subtitle Language. 4. Press ENTER. 5. Use the down arrow to select the desired language and ENTER to select. The default is Original. 6. To exit setup, press SETUP.	LANGUAGE System Language English Audio Language Original Subtitle Language Original Disc Menu Language Original
Disc Menu Language: 1. Press SETUP. 2. Press down arrow to select the Language menu. 3. Press right arrow key and then down arrow to highlight Disc Menu Language. 4. Press ENTER. 5. Use the down arrow to select the desired language and ENTER to select. The default is Original. 6. To exit setup, press SETUP.	LANGUAGE System Language English Audio Language Original Subtitle Language Original Disc Menu Language Original

System Setup

ATV/DTV:

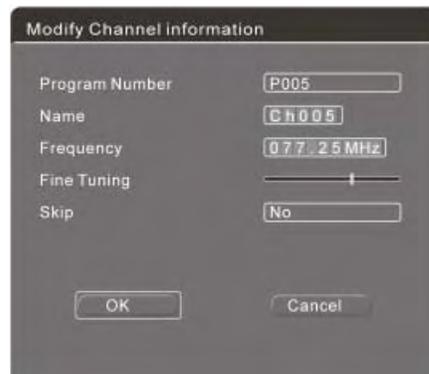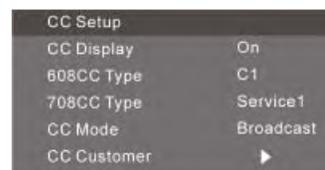|	
CLOSED CAPTION: 1. Press SETUP. 2. Press down arrow to select the ATV/DTV menu. 3. Press right arrow key to highlight ATV Closed Caption. 4. Press ENTER. 5. Use the down arrow to select "on" or "off" and ENTER to select. The default is "off". 6. To exit setup, press SETUP.	ATV / DTV ATV Closed Captions — OFF ATV Modify Channel — EDIT DTV Closed Captions — SETUP DTV Channels Setup — SETUP DTV Parental control — SETUP
MODIFY CHANNEL 1. Press SETUP. 2. Press down arrow to select the ATV/DTV menu. 3. Press right arrow to highlight ATV Modify Channel. 4. Press ENTER. 5. Press down arrow to "Fine Tuning". Use light and right arrows to adjust. 6. Press down arrow to select "skip". Press ENTER. Select "yes" or "no". Press ENTER. 7. To exit setup, press SETUP.	Modify Channel information Program Number — P005 Name — Ch005 Frequency — 077.25MHz Fine Tuning — Skip — No OK Cancel

DTV CLOSED CAPTION:
1. Press SETUP.
2. Press down arrow to select the ATV/DTV menu.
3. Press right arrow key and then down arrow to highlight DTV Closed Caption.
4. Press ENTER. A dialog box will appear. This is the closed captioning display menu.
  a. CC Display: press the right or left arrow to turn the closed captioning on or off. The default is off.
  b. 608CC Type: press the right or left arrow to select the desired text display. The default is C1.
  c. 708CC Type: press the right or left arrow to select the desired font and text side. The default is Service 1.
  d. CC Mode: use the right or left arrow to select "broadcast" or "customer". The default is "broadcast".
  e. CC Customer: If you changed the CC Mode to "customer" you will see another dialog box with many text display choices. Use the up and down arrows to select the desired option to change, and the right and left arrows to make such changes.
5. To exit setup, press SETUP.
	CC Setup
	CC Display — On
	608CC Type — C1
	708CC Type — Service1
	CC Mode — Broadcast
	CC Customer — ▶

System Setup

ATV/DVT, CONTINUED

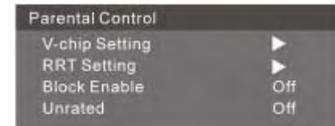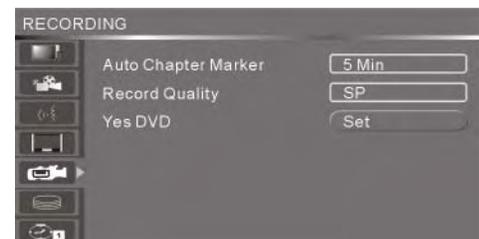|	

DTV CHANNEL SETUP:
1. Press SETUP.
2. Press down arrow to select the ATV/DTV menu.
3. Press right arrow key and then down arrow to highlight DTV Channel Setup.
4. Press ENTER. A dialog box will appear.
   a. Channel: press the right or left arrow to change the channel.
   b. Skip: press the right of left arrow to turn the skip channel function on or off
   c. Favorite list: press the right arrow key to enable. Use the right or left arrows to select and program your favorite channels. You can store up to five favorite channels.
5. To exit setup, press SETUP.
	Channel Setup
	Channel 47-2
	Skip Off
	Favorite list ▶

DTV PARENTAL CONTROL:
1. Press SETUP.
2. Press down arrow to select the ATV/DTV menu.
3. Press right arrow key and then down arrow to highlight DTV Parental Control.
4. Press ENTER. A dialog box will appear.
5. Enter the password 3-3-0-8 using the number pads and select "ok".
V-chip Setting
   a. USA TV Content Ratings = use the right arrow to block or view certain TV ratings
   b. Canada English Ratings = use the right arrow to block or view certain TV ratings
   c. Canada French Ratings = use the right arrow to block or view certain TV ratings
6. To exit setup, press SETUP.
 	
Block Enable:
• Use the down arrow to hightlight and press the right and left arrow to turn on or off.
	Parental Control
	V-chip Setting ▶
	RRT Setting ▶
	Block Enable Off
	Unrated Off

RECORDING:

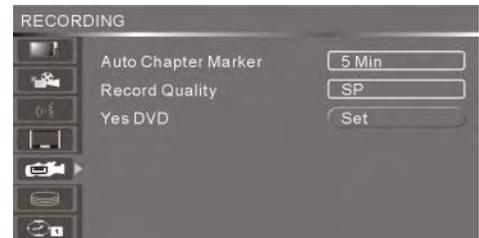|	
AUTO CHAPTER MARKER: 1. Press SETUP. 2. Press down arrow to select the Recording menu. 3. Press right arrow key to highlight Auto Chapter Marker. 4. Press ENTER. 5. Use the down arrow to select the desired length of time between auto chaptering and ENTER to select. The default is "5 min". 6. To exit setup, press SETUP. Note: If YesDVD is set to "on", YesDVD will make chapter markers at natural scene breaks.	RECORDING Auto Chapter Marker 5 Min Record Quality SP Yes DVD Set

System Setup

RECORDING, CONTINUED

RECORD QUALITY:
1. Press SETUP.
2. Press down arrow to select the Recording menu.
3. Press right arrow key and then down arrow to highlight Record Quality.
4. Press ENTER.
5. Use the down arrow to select the desired recording quality and press ENTER to select. The default is "SP".
   a. HQ = High quality
   b. SP = Standard play
   c. SP+ = Standard play plus
   d. LP = Long play
   e. EP = Extended play
   f. SLP = Super long play
6. To exit setup, press SETUP.	

YESDVD:
1. Press SETUP.
2. Press down arrow to select the Recording menu.
3. Press right arrow key and then down arrow to highlight YesDVD.
4. Press ENTER. A dialog box will appear.
   a. YesDVD: Use the down arrow to select "on" or "off" and ENTER to select. The default is "on".
   b. Music Video: Use the down arrow to select "on" or "off" and ENTER to select. The default is "on".
   c. About YesDVD: press ENTER for more information about the feature.
   d. About YesDVD BoosterPack: press ENTER for more information about the feature.
5. To exit setup, press SETUP.	

HARD/OPTICAL DISK:

TIMESHIFT BUFFER LENGTH: 1. Press SETUP. 2. Press down arrow to select the Hard/Optical Disk menu. 3. Press right arrow key to highlight TimeShift Buffer Length. 4. Press ENTER. 5. Use the down arrow to select the desired length of time to record and ENTER to select. The default is "60 minutes". 6. To exit setup, press SETUP.	

System Setup

HARD/OPTICAL DISK, CONTINUED

HARD DISK INFO: 1. Press SETUP. 2. Press down arrow to select the Hard/Optical Disk menu. 3. Press right arrow key and then down arrow to highlight Hard Disk Info. 4. Press ENTER. An informational dialog box will appear. 5. To exit, press ENTER. 6. To exit setup, press SETUP.	HARD / OPTICAL DISK TimeShift buffer length — 60 minutes Hard Disk Info — Show Format Hard Disk — Start Erase Optical Disc — OK
FORMAT HARD DISK: 1. Press SETUP. 2. Press down arrow to select the Hard/Optical Disk menu. 3. Press right arrow key and then down arrow to highlight Format Hard Disk. 4. Press ENTER. A dialog box will appear. 5. Select "ok" and press ENTER to format the hard disk, "cancel" to go back. 6. To exit setup, press SETUP.	HARD / OPTICAL DISK TimeShift buffer length — 60 minutes Hard Disk Info — Show Format Hard Disk — Start Erase Optical Disc — OK
ERASE OPTICAL DISK: 1. Press SETUP. 2. Press down arrow to select the Hard/Optical Disk menu. 3. Press right arrow key and then down arrow to highlight Erase Optical Disk. 4. Press ENTER. A dialog box will appear. 5. Select "ok" and press ENTER to format the optical disk, "cancel" to go back. 6. To exit setup, press SETUP.	HARD / OPTICAL DISK TimeShift buffer length — 60 minutes Hard Disk Info — Show Format Hard Disk — Start Erase Optical Disc — OK

DATE/TIME:

Note: Should you lose power or unplug the unit for more than 15 minutes, you must reset the date and time.

DAYLIGHT SAVING: 1. Press SETUP. 2. Press down arrow to select the Date-Time Setting menu. 3. Press right arrow key and then down arrow to highlight Daylight Saving. 4. Press ENTER. 5. Use the down arrow to select "on" or "off" and ENTER to select. The default is "off". 6. To exit setup, press SETUP.	DATE / TIME Daylights Saving — OFF Time Zone — Samo Date (mm / dd / yyyy) — 01 01 2007 Time (HH : MM) — PM 04 13

System Setup
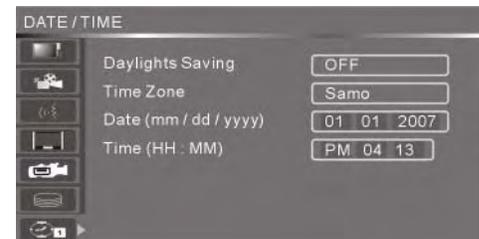
DATE/TIME, CONTINUED

TIME ZONE: 1. Press SETUP. 2. Press down arrow to select the Date-Time Setting menu. 3. Press right arrow key and then down arrow to highlight Time Zone. 4. Press ENTER. 5. Use the down arrow to select the desired time zone and ENTER to select. The default is "Samo". 6. To exit setup, press SETUP.	*DATE / TIME menu screen: Daylights Saving OFF, Time Zone Samo, Date (mm/dd/yyyy) 01 01 2007, Time (HH:MM) PM 04 13*
DATE (MM/DD/YYYY): 1. Press SETUP. 2. Press down arrow to select the Date-Time Setting menu. 3. Press right arrow key and then down arrow to highlight Date (mm/dd/yyyy). 4. Press ENTER. 5. Use the up and down arrows to select the desired month and the right arrow to select. 6. Use the up and down arrows to select the desired date and the right arrow to select. 7. Use the up and down arrows to select the desired year and press ENTER. 8. To exit setup, press SETUP.	*DATE / TIME menu screen: Daylights Saving OFF, Time Zone Samo, Date (mm/dd/yyyy) 01 01 2007, Time (HH:MM) PM 04 13*
TIME (HH:MM): 1. Press SETUP. 2. Press down arrow to select the Date-Time Setting menu. 3. Press right arrow key and then down arrow to highlight Time (hh:mm). 4. Press ENTER. 5. Use the up and down arrows to select "AM" or "PM" and the right arrow to select. 6. Use the up and down arrows to select the desired hour and the right arrow to select. 7. Use the up and down arrows to select the desired minutes and press ENTER. 8. To exit setup, press SETUP.	*DATE / TIME menu screen: Daylights Saving OFF, Time Zone Samo, Date (mm/dd/yyyy) 01 01 2007, Time (HH:MM) PM 04 13*

Source List

There are two ways to select the source.

1. Repeatedly press SOURCE. This will toggle you through all the video inputs.
2. Press and hold SOURCE for two seconds and release. A dialog box will appear. Use the down arrow to select the desired source and ENTER to select.

Note: If you want to access the USB or SD card, press FILE.

Recording

Before recording, endure the timeshift buffer is off by pressing TIMESHIFT on the remote. To confirm timeshift is off, press DISPLAY. The system state should indicate "stop".

RECORDING TO THE HDD USING THE REC BUTTON:
1. Select the source for the recording.
2. Press REC. A dialog box will appear.
3. Using the right or left arrow, select HDD. This will immediately start recording your current source input. While recording, the unit will not let you change channels or sources.
4. To stop recording, press STOP.

RECORD TO A DVD USING THE REC BUTTON:
1. Select the source for the recording.
2. Press REC. A dialog box will appear.
3. Using the right or left arrow, select DVD. This will immediately start recording your current source input. While recording, the unit will not let you change channels or sources.
4. To stop recording, press STOP. The unit will ask if you want to create a Yes DVD. If yes, see the YesDVD section in this manual.

Recording

TIMER RECORDING:
1. Press timer button on the remote control.
2. Press ENTER. A dialog box will appear.
   a. Source: press ENTER. Use right arrow then up and down arrows to select the input source or DTV scanned channel.
   b. Record To: press ENTER. Use right arrow then up and down arrows to select to record to the HDD or DVD
   c. Quality: press ENTER. Use right arrow then up and down arrows to select the recording quality
   d. Mode: press ENTER. Use right arrow then up and down arrows to select recording occurrence(s)
   e. Date: press ENTER. Use right arrow and then up and down arrows to set the start date
   f. Start: press ENTER. Use right arrow and then up and down arrows to set the start time
   g. End: press ENTER. Use right arrow and then up and down arrows to set the stop time
   h. Title: use right arrow and then up and down arrows to change letters and name the recording (up to eight letters)
   i. DVT Channel: press ENTER. Use right arrow then up and down arrows to set the recording channel
3. Select OK when complete. If you are watching another program when the timer recording is preparing to record, three minutes before the start recording time, a dialog box will appear. This allows you to cancel the timed recording. If you do not cancel the recording, the unit will automatically record the program and change to the timer record programmed channel. You will not be able to change channels while the unit is recording. To see the progress of the timer recording, press DISPLAY.
4. To stop a timer recording while the unit is recording, press STOP.
5. To cancel a timer recording, highlight the programmed recording and press ADD/CLEAR.

TIME SHIFT RECORDING:
Don't miss a scene from a live broadcast. If you have to step away from watching a live broadcast, follow these steps:

1. Press TIMESHIFT, then PAUSE. This will start recording the current channel and pause the live TV.
2. When you are ready to resume watching your program, press PLAY.
3. To return to live TV (and bypass your recording), press TIMESHIFT.

Copying from HDD to DVD

COPYING FROM HDD TO DVD:

1. Press HDD. A dialog box will appear.
2. Using the up and down arrows, select the segment you want to copy.
3. Press ADD/CLEAR.
4. Continue these steps to select any other material you want to copy.
5. When all desired material is selected, press HDD. This will transfer your material from HDD to DVD. (You will see an icon on the screen showing the percentage of transfer.) Note: please be patient as the material copies; this may take some time.

Playback

PLAYBACK FROM HDD:

1. Press HDD. A dialog box will appear.
2. Using the up and down arrows, select the recorded segment you would like to watch and press ENTER. A preview screen will appear.
3. Press ENTER again to start watching.

PLAYBACK FROM DVD:

1. Press DVD. Preview screens will appear.
2. Using the up and down arrows, select the recorded segment you would like to watch and press ENTER.

OPEN/CLOSE	Opens or closes the disc tray
PAUSE / ❙❙	During playback, press PAUSE to pause playback; press repeatedly to go either forward or backward frame-by-frame using the right and left arrows
SKIP ◄◄ & ►►❘	During playback, press to go to the next chapter or title or to return to the beginning of the current chapter or title.
SCAN ◄◄ & ►►	During playback, press to select the scan forward or backward speed; when playback is paused, press repeatedly to play in slow motion.
ZOOM	During playback, press to enlarge the video image (1x - 2x - 4x - normal)
TITLE	If the current DVD has a title menu, press to view. If not, pressing TITLE will show the disc menu.
MENU	Press to see the menu screen
SUBTITLE	During playback, press SUBTITLE, then the right and left arrows to select the desired subtitle language.
AUDIO	During DVD playback, press repeatedly to hear a different audio language or track; during HDD playback, press AUDIO, then the right and left arrows repeatedly to hear a different audio channel.

Editing

EDIT FROM DVD:
1. Press DVD. Preview screens will appear.
2. Using the up and down arrows, select the recorded segment you would like to edit and press right arrow key. Use the up and down arrow key to select the edit you would to make:
    a. Play title: this will playback you video clip
    b. Edit title: use the down arrow key and press ENTER. Another dialog box will appear while playing back your video clip. Your selections are:
        i. Title
        ii. Chapter
        iii. Play
        iv. Chapter Marker: press the right arrow and your selections are Insert Marker, Delete Marker and Delete All Markers. Inserting a marker adds chapters to your title. This allows you to skip/advance through your video clip.
        v. Hide Chapter: as you create markers this function allows you to block chapters during playback. By pressing ENTER during playback of a Chapter you can Hide or Unhide Chapters.
        vi. Index Picture: This function allows you to change the initial image for the video clip. Pressing the ENTER button while viewing the video clip set the index picture.
        vii. Split Title: This function allows you to split the current chapter into two titles. Press ENTER at the point you are watching your video clip.
        viii. T-Elapsed: this shows you how long the video clip is.
    e. Rename Title: Using the down arrow button ENTER to select this option. It allows you to rename your chapter title. A dialog box will appear with a keyboard. You need to use the arrow keys and the ENTER button to make changes.
    f. Erase title: Use the down arrow and press ENTER. A dialog box will appear that will allow you to delete the current video clip. YES to confirm deletion, NO to cancel.
    g. Overwrite title: Use the arrow button and press ENTER. You will go to the last input source. Press the REC button. A dialog box will appear. Recoding to DVD will record over the existing video clip space on the DVD.
    h. Overwrite disk: Use the arrow button and press ENTER. You will go to the last input source. Press the REC button. A dialog box will appear. Recoding to DVD will record over the entire DVD disk.
    i. Append title: Use the arrow button and press ENTER. You will go to the last input source. Press the REC button. A dialog box will appear. Recording to DVD will add to the current video clip.
    j. Copy: Use the arrow button and press ENTER. This will copy the current video clip to the HDD.

Editing

Before making any edits to your recorded programs, you must unprotect the recording. Please refer to step 2-i below.

EDIT FROM HDD:
1. Press HDD. A dialog box will appear.
2. Using the up and down arrows, select the recorded segment you would like to edit and press right arrow key. Use the up and down arrow key to select the edit you would to make:
    a. Play
    b. Delete: press ENTER. A dialog box will appear. Select "yes" to confirm, "no" to exit.
    c. Split: press ENTER. A dialog box will appear. The program will begin to play. When you are ready to split the program, press ENTER. Select "ok" to confirm you want to split the recording, "cancel" to exit. You can also use the DVD functions buttons (fast-forward, play, pause, stop, etc.) to find the point at which you would like to split.
    d. Segment: press ENTER. The program will begin to play. When you are ready to remove a segment press ENTER. To stop deleting the segment, press ENTER again. You can also use the DVD functions buttons (fast-forward, play, pause, stop, etc.) to segment.   To restore the deleted segment, press ADD/CLEAR while the segment is playing back.
    e. Combine: press ENTER. Press ENTER again to confirm, RETURN to cancel.
    f. Change index picture: press ENTER. The program will begin to play. When you find a screen you want as the index picture, press ENTER. A dialog box will appear. Select "ok" to confirm, "cancel" to continue viewing.
    g. Rename: press ENTER. A keyboard will appear. Use the arrows and ENTER to select the letters to rename your title. Select "ok" to accept, "exit" to cancel.
    h. Lock: press ENTER. This locks the title and no edits can be made. To unlock, press right arrow and scroll down to "unlock". Using the number pads, enter the password 3-3-0-8. Press ENTER again. The title is now unlocked.
    i. Unprotect: press ENTER.

- To copy from HDD to DVD, using the up and down arrows, select the recorded segment you would like to edit. Press ADD/CLEAR to make the transfer and follow the on-screen directions. Copying will take some time; please be patient. After the copying is complete, you will have the option to create a YesDVD.

- SORTING: To view the title list in different orders, press EDIT until the recorded programs are in the desired order.

Editing

ADDITIONAL EDITING FEATURES:

1. Press DVD. Preview screens will appear.
2. Press the up arrow, then the right arrow. A dialog box will appear.
3. Using the up and down arrows, select the edit you want to make and press ENTER:
    a. Play
    b. Rename disc: a keyboard will appear. Use the arrow buttons to rename the entire disc
    c. Erase optical disc: a dialog box will appear. Select "yes" to erase, "no" to cancel. (only for DVD+/-RW discs)
    d. Record a new title: this brings you to the last input source used. Press REC button and using the right or left arrow, select the source to which you would like to record (HDD or DVD). Press STOP to stop recording. You will be asked if you want create a YesDVD. To create a YesDVD, select "yes, create YesDVD disc", select "no" to continue recording other material.
    e. Overwrite disc: this will prepare your disc to record over what you already have on the disc. Press REC button and using the left arrow, select DVD. Note: this will erase and record over already-recorded material (only for DVD+/-RW discs)
    f. YesDVD finalize: this will automatically finalize the disc
    g. Lock disc: this will automatically lock the disc so no further edits can be made. To unlock, press left arrow, then right arrow, and then the up and down arrows to select "unlock disc" and press ENTER. (only for DVD+/-RW discs)
    h. Copy all: this will automatically copy the DVD material to the HDD. Notes: this will only copy video segments you have recorded. This will NOT copy full-length DVD feature movies.

File Manager

USB/SD:

1. Press FILE. The file manager will appear. Select the correct card label and press ENTER.
2. Using the up and down arrows, select the file you would like to access.
3. Press right arrow to do one of the following:
    1. Copy: using up and down arrows, select "Copy" and press ENTER. Highlight the directory you want to copy to and press the right arrow. Highlight "Do copy" to confirm.
    2. Delete (inactive)
    3. Rename (inactive)
    4. Move (inactive)
    5. Create dir: using the up and down arrows, select "Create dir" and press ENTER. Using the arrows, type a directory name and "OK" when done.
    6. Select all: using the up and down arrows, select "Select all" and press ENTER. This will select all items.
    7. Unselect all: using the up and down arrows, select "Unselect all" and press ENTER. This will uncheck all items.
    8. Add to favorite
    9. Show favorite list

HDD:

1. Press FILE. The file manager will appear. Select "HDD" and press ENTER.
2. Using the up and down arrows, select the file you would like to access.
3. Press right arrow to do one of the following:
    a. Copy: using up and down arrows, select "Copy" and press ENTER. Highlight the directory you want to copy to and press the right arrow. Highlight "Do copy" to confirm.
    b. Delete: using the up and down arrows, select "Delete" and press ENTER. A dialog box will appear. Select "yes" to delete, "no" to cancel.
    c. Rename: using the up and down arrows, select "Rename" and press ENTER. A keyboard will appear. Using the arrows, type a name and "OK" when done.
    d. Move: using the up and down arrows, select "Move" and press ENTER. Select the desired directory and press ENTER.
    e. Create dir: using the up and down arrows, select "Create dir" and press ENTER. Using the arrows, type a directory name and "OK" when done.
    f. Select all: using the up and down arrows, select "Select all" and press ENTER. This will select all items.
    g. Unselect all: using the up and down arrows, select "Unselect all" and press ENTER. This will uncheck all items.
    1. Add to favorite
    2. Show favorite list

USB and SD

VIEWING MATERIAL FROM YOUR USB/SD:
1. Insert USB/SD into the appropriate slot on the DVD recorder.
2. Press FILE. A dialog box will appear.
3. Using the up and down arrows, the device you want to access and press ENTER. You will see a list of materials from your card.
4. Using the up and down arrows, select the item you want to view and press ENTER to view. Press ENTER again to return to the File Manager.

COPY MATERIAL FROM YOUR USB/SD TO HDD:
1. Insert USB/SD into the appropriate slot on the DVD recorder.
2. Press FILE. A dialog box will appear.
3. Using the up and down arrows, highlight the material you want to copy.
4. Press right arrow and a dialog box will appear.
5. Highlight "copy" and press ENTER.
6. Using the up and down arrows, select the directory you wish to move the material to.
7. Press right arrow. Highlight "Do Copy" and press ENTER.

YesDVD®

WHAT IS YesDVD®:

YesDVD is software included in your DVD Recorder that makes it easy to transfer your video content to the DVD Recorder's hard disc drive or DVDs with professional features.

YesDVD will automatically:

- Analyze your video and set chapter points at natural scene breaks
- Build chapter menu screens with pictures representing chapter points for easy scene selection
- Produce 3 one-minute music video highlights using the clearest scenes from your video (not available for hard disc drive recordings)
- Create a DVD case coversheet to be printed from your computer. The DVD case coversheet includes pictures from your video and can be printed for a standard DVD case or a standard jewel case (not available for hard disc drive recordings)

HOW TO SET UP YesDVD:

1. With your remote control, press the SETUP button to enter the setup menu.
2. Use the remote control arrow buttons to highlight the YesDVD option and select "Set". Insure YesDVD is set to "On".
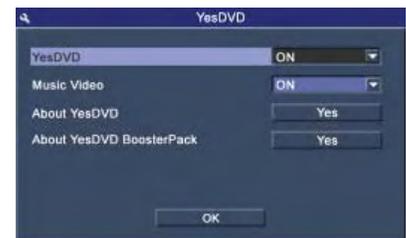
HOW TO CREATE A YesDVD DISC:

1. Place a blank DVD+R/RW or DVD-R/RW disc in the DVD tray.
2. Select input signal source. Press the REC button to start recording. Select to record to DVD.
3. You may stop the recording by press the STOP button on the remote control. A dialog box will appear asking if you would like to create a YesDVD disc. Select "Yes, create disc" to start disc creation. If you want to record more titles to the disc before creating the YesDVD disc, select "no" until you are finished or when the disc has reached maximum capacity. You can also create the YesDVD disc in the disc title menu by choosing the "YesDVD Finalize" option.
4. Sit back and watch while your DVD Recorder makes the YesDVD for you.

Notes:

- Once you have created a YesDVD disc, you can no longer add footage to your disc.
- The television color system (TV type) of input signal source must be consistent with the DVD Recorder or the YesDVD cannot be created.
- If your DVD Recording is longer than five minutes, video music highlights will be created from your footage (direct to DVD recordings only).
- If you preform editing functions (ie. overwrite title, hide chapter, etc.) to the recordings on the optical disc, the disc cannot be finalized as a YesDVD disc.
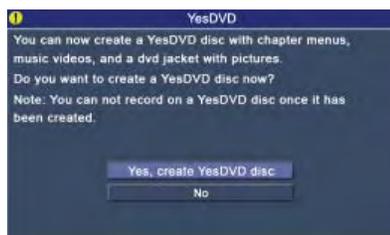
YesDVD®

YESDVD ON YOUR HARD DISC DRIVE:
YesDVD can record video footage to the hard drive of your DVD Recorder. YesDVD software sets chapter points at natural scene breaks so that you can easily jump directly to the segments you want to watch.

VIEWING YOUR YESDVD RECORDINGS ON HDD:
After recording, you can view the list of your recordings by pressing HDD on the remote control. Select the recording you would like to view. If the recording is a YesDVD recording, the YesDVD logo will appear in the preview picture.

When you select a YesDVD recording, a YesDVD chapter menu will appear. Use the remote control's arrow buttons to navigate through the chapters. You will notice that when you highlight a chapter picture, that chapter picture will be replaced with a short video preview of that chapter. The chapter pictures also show time stamps to guide you through the recording.

When you are viewing the recording, you can use the NEXT or PREV chapter buttons on the remote control to jump to chapters. And, you can press the right arrow button to kips 30 seconds forward or the left arrow button to replay 10 seconds backwards.

Notes:
- Smart skip points which are at natural scene break points are set in the time shift mode's time shirt buffer, you can use the NEXT or PREV chapter buttons on the remote control to navigate through the chapters.
- If you preform editing functions (ie. split, segment, combine) to YesDVD recordings on the hard drive, the YesDVD features will be lost.

DUB HDD RECORDINGS TO DVD:
Use this feature to archive hard disc drive recordings onto DVD+R/RW or DVD-R/RW discs. If the recording contained YesDVD chapter menus, those menus will be saved to the DVD. The case coversheet files are also saved to the disc.

1. Insert black DVD+R/RW or DVD-R/RW into DVD tray.
2. Go to the HDD title list.
3. For each recording you would like to include on the DVD disc, use the remote control's arrow buttons to select the recording and press the ADD/CLEAR button.
4. Press the HDD button to begin dubbing.

Notes:
- When you dub a YesDVD recording from HDD to DVD, the YesDVD chapter menus on the DVD will not include chapter time stamps and chapter video previews.
- The HDD recording cannot be played back until dubbing is finished.
- You cannot dub more recordings to the YesDVD disc.

PRINT THE CASE COVERSHEET:

1. Remove the YesDVD disc from the DVD Recorder.
2. Insert the YesDVD disc into your computer's DVD-ROM tray.
3. A window will appear with printing instructions. Choose a coversheet for a standard DVD case or a standard jewel case. Select the size of coversheet you would like and print the coversheet.
4. Use scissors to cut the case coversheet out of your printer page.
5. Insert your DVD case coversheet into the standard 5" x 7" (13.5cm x 19cm) DVD case or fold the jewel case coversheet in half and insert into standard 4.75" x 4.75" (12.5cm x 12.5cm) jewel case.

BOOSTERPACK UPGRADES:

You can upgrade to high-quality AC3 music files for the music video highlights by installing YesDVD's BoosterPack into your DVD Recorder. BoosterPack files are available for download from YesDVD's website. All you need is a computer with a CD/DVD burner and a blank CD-ROM of DVD±R/RW disc.

1. To obtain the BoosterPack file, go to http://www.yesvideo.com/boosterpack and download the YesDVDBoosterPack.dat file.
2. After downloading YesDVDBoosterPack.dat to your computer, use your computer's CD/DVD burning software to write the file onto a CD-ROM or DVD.
3. Insert the disc containing the BoosterPack file into your DVD Recorder. A dialog box will appear asking if you would like to continue with the BoosterPack installation. Select OK.
4. After you see the dialog box with the message that BoosterPack has been upgraded successfully, remove the CD or DVD from your DVD Recorder.

Notes:
- When you install BoosterPack files from a CD, each feature included in that BoosterPack file overwrites features from previously installed BoosterPack files.
- Erasing the hard disc removed previously-installed BoosterPack features. You must re-install BoosterPack in order to reset the features.

Troubleshooting Guide

Before contacting service personnel, please check possible problems and solutions below:

SYMPTOM	POSSIBLE CAUSE	REMEDY
No power	1. Power supply disconnected 2. Bad connection between power plug and receptacle 3. Power of receptacle switched off	1. Connect to power supply 2. Plug again or replace receptacle with new one 3. Switch on receptacle
No sound	1. Incorrect input connection 2. Disc is deformed or dirty 3. System is in mute status	1. Connect inputs properly 2. Clean of fix disc 3. Press "MUTE" button
No picture	1. Incorrect signal connection 2. Incorrect TV status 3. TV system out mode is Progressive, but your TV system is Interlace mode	1. Connect the inputs correctly 2. Re-adjust TV/AV status 3. Press PS/IS to angle or mode
No color	1. Wrong TV system selection 2. Improper color adjustment 3. Incorrect video output	1. Set up system by pressing "SYSTEM" button on remote control 2. Readjust color 3. Check for correct video output settings
Disc cannot be played	1. No disc in drive 2. Disc placed incorrectly 3. Moisture condensed in unit 4. Not in playing status 5. Wrong disc format 6. Disc dirty	1. Insert disc 2. Put disc on disc tray properly with label side up 3. Leave unit on for about an hour (without disc) before using again 4. Press "PLAY" button to switch playing status 5. Please with supported disc format 6. Clean disc with soft cloth from center to edge
Remote control malfunction	1. Remote control not directed at sensor 2. Receiving distance is more than 8 meters 3. Low voltage in remote control batteries 4. Outside obstacle between unit and remote control	1. Direct remote control at sensor 2. Reduce receiving distance 3. Replace batteries 4. Remove obstacle
Sudden malfunction	1. Bad disc quality 2. Button was pressed mistakenly 3. Outside static	1. Wait 5-10 seconds, playback will be restored 2. Turn off and restart unit 3. Shut off for 1-2 minutes and restart unit
Picture dividing	1. Selected system is incompatible with disc	1. Set up correct system
External signals cannot be recorded	1. Incorrect system connection 2. No disc or re-recordable disc 3. Disc has been finished 4. No free disc space	1. Connect properly 2. Insert recordable disc 3. Change disc 4. Change disc
No monitor signal	1. Input source not prepared 2. Incorrect video output system 3. Actual input source not consistent with selected	1. Prepare input source 2. Switch video output system 3. Select proper input source
Timer recording cannot be done	1. Disc does not meet requirements 2. Wrong time setting 3. Input source does not work properly during recording time 4. System power failure	1. Replace with new disc 2. Set up time again 3. Ensure input source works correctly during recording time 4. Set system to standby
Recording aborted halfway	1. There is no free disc space 2. Bad disc quality	1. Replace with blank disc 2. Replace with high quality disc

Technical Specifications

Supported disc formats	DVD, DVD+R/RW, DVD-R/RW, SVCD, VCD, JPEG, MPEG4		
Supported recordable disc functions	DVD+R/RW, DVD-R/RW		
Recording format	DVD, MPEG-II		
Recording quality	HQ (Perfect Quality), SP (Standard Play), SP+, LP (Extended Play), EP (Long Play), SLP (Super Long Play)		
Input	Composite video input (front and rear) S-video input (Y+C) DV input (1394) RF input Analog audio input		
Output	Composite video output S-video output (Y+C) Component video output Analog 5.1 channel audio output Digital audio coaxial output Digital audio optical output		
Input RF features	System: NTSC Impendance: 75 imbalance coaxial cable		
Video features	Output	Composite video System: NTSC/PAL Video label: 1.00.2Vp-p 75 S-video Y output level: 1.0 Vp-p 75 C output level: 0.3 Vp-p 75 Video horizontal resolution: 500 lines Y S/N 65dB	
	Input	Composite video System: NTSC/PAL Video level: 1.00.2Vp-p 75 S-video Y input level: 1.0Vp-p 75 C input level: 0.3 Vp-p 75	
Audio specifications	Output	Audio level: 1.0~2.0Vrms (10k ohm load) Frequency response: 4Hz~44KHz (2dB) S/N ratio: 90dB Audio distortion + noise: -65dB (1KHz)	
	Input	Audio level: 2.0 Vrms (10ohm load)	
General specifications	HDD: 80GB Power supply: AC110-240V~50/60Hz Power consumption: 40W Standby power consumption: 3W Size: 430mm x 48mm x 308mm Net weight: 4.6kg Gross weight: 5.3kg		
Working humidity	Relative humidity: 15-75% (without water condensation)		

* Product specifications are subject to change without notice

Glossary of Terms

TERM	DEFINITION
Chapter	Chapter refers to the subtitle of each title of division on the DVD image or music. Normally, one title contains several chapters. Each chapter has its own unique number so it can be searched easily.
Compatibility (Finalize)	Compatibility (Finalize) means to process the information stored in the disc to make it compatible with other DVD players. Without this process, the disc can only be played on this unit. This function is relevant to DVD+R discs only.
DVD+R disc	DVD+R discs are also called Write-once DVD Discs. It can be recorded for only one time. The recorded disc can be played on other DVD players after being closed.
DVD+RW disc	DVD+RW discs are also called DVD+Rewritabe discs. You can record onto this disc multiple times.
Erasing the disc	Erasing the disc means removing information stored on the optical disc or hard disc.
Multiple angles function	Some DVDs record different images of one view taken from different angles of a screen. The user can view such angles by pressing the "angle" key.
Multiple languages function	Some DVDs record sound ins several languages. The different languages can be released according to the corresponding function menu.
Multiple subtitle function	Some DVDs record the picture description in multiple languages. Press the "SUBTITLE" key while watching, and the recorded subtitle languages will appear.
Preparation for recording	Formal preparation for recording includes examining the type of the disc and the recording format, doing necessary optical adaptation and pre-writing the content area.
Progressive and Interlace	Progressive means a frame picture can be scanned to one field. Interlace means a frame picture can be scanned to two fields. This unit provides both progressive and interlace modes.
Recording quality and length	For DVD±R/RW discs with the capacity of 4.7GB, HDD disc with capacity of 80GB, there are 6 different recording qualities in accordance with the compressing program. SLP: Good image quality; 6 hours of recording EP: Good image quality; 4 hours of recording LP: Better image quality; 3 hours of recording SP+: Good image quality; 2.5 hours of recording SP: Better image quality; 2 hours of recording HQ: Best image quality; 1 hour of recording

Glossary of Terms

TERM	DEFINITION
Region code	In order to protect intellectual property, the relevant organization has divided the world into 6 regions. Each region can only use DVD players and DVD discs with certain region codes. The six regions are: 1 Canada, USA and its possessions 2 Japan, Europe, South Africa, Middle East (including Egypt) 3 Southeast Asia, East Asia (including Hong Kong) 4 Australia, New Zealand, Central America, Mexico, South America, Caribbean Sea 5 Former USSR region, India, Africa (including South Korea and Mongolia) 6 Mainland China
Title	The images and music in the DVD disc are divided into several parts. The biggest unit for each part is the title. Each title corresponds with a serial number to that it can be easily searched
Track	Music or images on CDs, DVDs, or VCDs is divided into several areas. Each area is a track. Each track has it own unique number so it can be searched easily.

For service, support and warranty information, visit www.polaroid.com.